

REMARKS

Claims 1-4, 7, 8, 10, 11, 14, 16, 19-24 and 26-35, and 37-39 are now currently pending in the present application. Claims 1, 2, 7, 10, 14, 24, 26, 32, 33 and 37 have been amended herein. Claims 9, 12, 13 and 36 have been cancelled herein. Support for the present claim amendments are editorial in nature or may be found in the specification, as discussed herein below. No new matter has been added by way of the present claim amendments.

Applicant respectfully submits that no new issues are raised that would present the Examiner with the burden of additional search and/or consideration. In the event that the present submission does not place the application into condition for allowance, entry thereof is respectfully requested as placing the application into better form for appeal.

Rejection under 35 U.S.C. §112, first paragraph

The Examiner has rejected claims 1-4, 7-14, 16, 19-24 and 26-39, as lacking a written description in the specification.

With regard to claim 1, the Examiner states that the limitation "wherein the isotacticity of the first polymer grade is changed" is new matter. Additionally, the Examiner finds that the language "catalyst particles are supported on an external carrier" found in claim 1 is new matter.

Claim 1 has been amended herein, which is supported by the specification at page 4, lines 1-3 and 13; page 5, lines 1-5 (using different external donors for producing first and second polymer grades); page 11, lines 1-9.

Regarding claim 33, the Examiner states that the limitation wherein the catalyst system includes "both first and second external donors" is new matter. Applicant has amended claim 33 to reflect that during polymerization either first or second donor are used (i.e. first external donor for first polymer grade and second external donor for second polymer grade).

Rejection under 35 U.S.C. §112, second paragraph

The Examiner has rejected claims 1-4, 7-14, 16, 19-24 and 26-39, stating that the claims are unclear or that certain elements lack antecedent basis. We have arranged our comments regarding the claims to align with the Office Action.

Regarding claim 1(i), Applicant has amended the claim to specifically recite the amount of the melt flow rate. Moreover, the hydrogen feed is further defined in accordance with the specification at page 7, lines 1-8 and page 11, lines 1-9.

Regarding claim 1(ii) and claim 2, Applicant has amended the claims to address the Examiner's concerns.

Regarding claims, 7 and 11 (claim 15 was cancelled in the reply dated May 21, 2008), Applicant has replaced "predetermined size range" with 5-200 μm , as disclosed in the specification at page 12, lines 26-28.

Further regarding claim 7, claim 1 has been amended to recite that the catalyst particles are not supported on an external carrier. Thus, claim 7 now has the requisite antecedent basis.

Regarding claim 14, Applicant has amended the claim as recommended by the Examiner.

Regarding claims 25 (claim 25 was cancelled in the reply dated May 21, 2008) and 26, the phrase "predetermined level" has been deleted from claim 26.

Regarding claim 33, it should be noted that target of the present invention is not to make some specific type of polymers with specifically defined melting flow rate (MFR) and isotacticity. Instead, the aim of the present invention is that the isotacticity can be changed, while the MFR remains essentially unchanged without the need of changing the hydrogen feed.

The following characteristics regarding propylene polymerization process are conventionally known:

- with different external donors different isotacticities are obtained;
- with hydrogen feed MFRs (i.e. molecular weight) can be effected;
- normally (in prior art), external donors have effect on catalyst hydrogen sensitivity, and thus to MFR of the product (i.e. normally, if MFR is desired to be maintained at the same level with the first polymer, when the external donor is changed, it means that the hydrogen feed has to be changed accordingly).

However, in the present invention the external donor can be changed (thus obtaining different isotacticity), which has no effect on the hydrogen sensitivity of the catalyst now used (i.e., MFR maintains the same level without the need to change the hydrogen feed). Thus, Applicant respectfully submits that it is unnecessary to define any specific level of isotacticity in claim 33.

Reconsideration and withdrawal of each of the outstanding rejections are respectfully requested.

Rejection under 35 U.S.C. §102

Claims 33-35 and 37-39 stand rejected under 35 U.S.C. §102(b) as being anticipated by USP 7,078,468 to Thorman (hereinafter "Thorman"). Applicant respectfully traverses.

The Examiner has taken the position that Thorman teaches a process for producing polypropylene in the presence of Ziegler-Natta (ZN) catalyst with different silanes. In particular, one type of silane (DSBDMS) has been found to produce propylene polymers with desired properties (i.e., isotacticity/XS). *See e.g.*, column 4, lines 17 – 23. Thorman also teaches, which is conventionally known, that different silanes (external donors) have different hydrogen sensitivities. This applies to the normal, commercially-supported ZN catalysts. *See* column 5, lines 28 – 29. This is exemplified in Table II.

The Examiner has referenced Table II in support of the outstanding rejection stating that the Example pairings anticipate the instant claims. However Table II has to be considered very carefully. The Examples using different Donors, but having the same MF or the same hydrogen feed (H_2), have to be compared in order to be comparable to the present invention. Note the following distinctions between Table II and the present invention:

Example 1 and Example 9

- Xylene solubles (XS) are changed
- Hydrogen feed (H_2) feed is changed 12.5 %
- Melt flow rates (MFR) are different (i.e. hydrogen sensitivity is not the same)

Example 2 and Example 10

- Different Al/Si ratio
- XS is changed
- H_2 is changed 7.5 %
- MFR is changed

Example 3 and Example 11

- H_2 is changed 12.5 %
- Different XS
- Different MFR

Example 3 and Example 15

- Same H_2 feed
- Different XS
- Different MFR

Example 9 and Example 17

- Same H₂ feed
- Different XS
- Different MFR

Thus, Applicant respectfully submits that it is clear that none of the examples is comparable to, or in any way describes the present invention. Thorman merely describes the well known fact that different external donors behave differently regarding the XS and hydrogen sensitivity, and may be selected according to desired donors, as needed.

Applicant has shown that this is not the case, when the specific catalyst is used, and thus this allows easier grade transition without losses of high quality material (i.e., transition products). Rather, desired products can be obtained directly without the need of readjustment of hydrogen feed, etc., which in full-scale polymer production is a daunting task.

Therefore, in view of the above-noted distinctions between Thorman and the present invention, Applicant respectfully submits that the cited prior art cannot anticipate the present invention, within the meaning of 35 U.S.C. 102. Reconsideration and withdrawal are respectfully requested.

In view of the foregoing, Applicant believes the pending application is in condition for allowance. A Notice of Allowance is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Monique T. Cole, Reg. No. 60,154 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.


Application No. 10/582,781
Amendment dated November 25, 2008
After Final Office Action of August 25, 2008

Docket No.: 0365-0679PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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